



CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

August 12, 2005

S. 864

Nuclear Security Act of 2005

*As reported by the Senate Committee on Environment and Public Works
on July 1, 2005*

SUMMARY

S. 864 would amend the Atomic Energy Act of 1954 to establish several new programs designed to protect the nation's nuclear infrastructure. Based on information from the Nuclear Regulatory Commission (NRC), CBO estimates that implementing S. 864 would have a gross cost of \$10 million in 2006 and \$64 million over the 2006-2010 period. Under current law, the NRC is authorized to collect fees to offset 90 percent of most of its budget authority provided from the general fund (a portion of funds are provided from the Nuclear Waste Fund) in 2005 and 33 percent for each year after 2005. After accounting for those collections, CBO estimates that S. 864 would have a net cost of \$5 million in 2006 and \$41 million over the 2006-2010 period.

S. 864 would impose both intergovernmental and private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) by requiring expanded security procedures at certain nuclear facilities, new guidelines for tracking spent fuel rods and segments at nuclear power plants, and a mandatory tracking system for radiation sources in the United States. The bill also would impose a private-sector mandate on persons who import and export radiation sources by requiring them to meet new requirements. Finally, the bill would preempt state laws restricting the use and transport of certain firearms and may preempt state regulation of the disposal of certain types of byproduct material by transferring that authority to the NRC. CBO estimates that the aggregate cost of the mandates in the bill would be below the annual thresholds established in UMRA for intergovernmental mandates (\$62 million in 2005, adjusted annually for inflation) and for private-sector mandates (\$123 million in 2005, adjusted annually for inflation).

ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary impact of S. 864 is shown in the following table. The costs of this legislation fall within budget function 270 (energy).

	By Fiscal Year, in Millions of Dollars				
	2006	2007	2008	2009	2010
CHANGES IN SPENDING SUBJECT TO APPROPRIATION					
Evaluation of Security-Response Plans					
Estimated Authorization Level	7	6	6	6	6
Estimated Outlays	5	5	6	6	6
Radiation Source Tracking System					
Estimated Authorization Level	5	6	4	4	4
Estimated Outlays	4	5	4	4	4
Treatment of Radioactive Byproduct					
Estimated Authorization Level	1	6	3	3	3
Estimated Outlays	1	4	3	3	3
Firearms Use					
Estimated Authorization Level	1	0	0	0	0
Estimated Outlays	1	0	0	0	0
Gross Changes					
Estimated Authorization Level	14	17	12	12	13
Estimated Outlays	10	15	13	13	13
NRC Fee Collection Offset ^a					
Estimated Authorization Level	-5	-6	-4	-4	-4
Estimated Outlays	-5	-6	-4	-4	-4
Net Changes Under S. 864					
Estimated Authorization Level	10	12	8	8	8
Estimated Outlays	5	9	9	9	8

NOTE: Details may not sum to totals because of rounding.

- a. Under current law, collections are authorized at declining percentages of the NRC's budget (90 percent in 2005 and 33 percent after 2005). To estimate the net change in NRC costs under S. 864, that 33 percent rate was applied to the estimated cost of the programs under S. 864.

BASIS OF ESTIMATE

For this estimate, CBO assumes that the bill will be enacted near the start of fiscal year 2006, that the necessary amounts will be appropriated for each year, and that outlays will occur at historical rates for similar programs.

S. 864 would require the NRC to update and adopt rulemakings and programs related to security at the nation's nuclear power plants. The bill would set new criteria for preparing and evaluating security response plans at nuclear facilities, require a tracking system for radiation sources, and set requirements for the transport and disposal of radioactive byproduct material, firearms use by certain security personnel, background checks for certain security personnel, and guidelines for tracking the location of spent fuel rods. Under current law, the NRC is authorized to collect annual fees to offset 90 percent of most of its general fund appropriation. When this authority expires at the end of fiscal year 2005, the NRC will be authorized to collect annual user fees from its licensees of up to only 33 percent of its budget.

Based on information from the NRC, CBO estimates that implementing S. 864 would have a gross cost of \$64 million over the 2006-2010 period, assuming appropriation of the necessary amounts. After accounting for offsetting collections, CBO estimates that S. 864 would have a net cost of \$41 million over the 2006-2010 period.

Evaluation of Security-Response Plans

S. 864 would require the NRC to evaluate the security response plans at designated nuclear facilities at least once every three years. The evaluations would simulate the threats that nuclear facilities must be able to defend against. We expect that the NRC would use contractors to conduct mock exercises known as force-on-force. Under S. 864, the NRC also would revise its "design basis threats" or the attack scenario nuclear facilities must be capable of defeating. Based on information from the NRC, CBO estimates that the NRC would incur a gross cost of about \$5 million in 2006 and \$27 million over the 2006-2010 period to revise those requirements.

Radiation Source Tracking System

Under S. 864, the NRC would have to establish a system for tracking radiation sources in the United States that is compatible with the Secretary of Transportation's tracking system of radiation shipments. S. 864 also would establish a task force on radiation source protection and security to recommend measures to protect radiation sources from potential terrorist

threats. The bill also would require the National Academy of Sciences to conduct a study on the industrial, research, and commercial uses for radiation sources. Based on information from the NRC, CBO estimates that this program would have a gross cost of \$4 million in 2006 and \$21 million over the 2006-2010 period.

Treatment of Radioactive Byproduct Material

S. 864 would establish regulations for the transport and disposal of radioactive byproduct material and expand the definition of radioactive byproduct material to include naturally occurring or accelerator-produced radioactive material (known as NARM). Under current law, 35 states have entered into agreements with the NRC that authorize them to treat and dispose of certain radioactive byproduct materials, including NARM. S. 864 would require the NRC to prepare a transition plan for states to transfer regulatory authority over NARM byproducts to the NRC. CBO estimates that the NRC would incur a gross cost of \$14 million over the 2006-2010 period to oversee disposal of NARM in the 15 states without waste disposal agreements with the NRC. Under the bill, those states may opt to obtain a waiver allowing them to retain oversight of NARM disposal. In that event, NRC costs would be lower.

Firearms Use and Background Checks

S. 864 would authorize the NRC to permit certain security employees at nuclear facilities to use several types of firearms and would establish guidelines for checking the background of those security personnel. Based on information from the NRC, CBO estimates that the one-time cost of establishing those procedures would be about \$1 million in 2006.

INTERGOVERNMENTAL AND PRIVATE-SECTOR IMPACT

S. 864 would impose both intergovernmental and private-sector mandates as defined in UMRA by:

- Increasing costs borne by licensees to pay for fingerprint checks by increasing the number of individuals requiring background checks;
- Requiring certain nuclear sites to correct any security defects identified during NRC's force-on-force security evaluations;

- Establishing new guidelines for tracking and controlling individual spent fuel rods and segments by nuclear power plants; and
- Requiring NRC licensees that possess or transport certain radiation sources to identify those sources and report any loss or change in the location to the NRC.

The bill also would impose an additional private-sector mandate on individuals who import and export radiation sources by requiring them to meet new requirements. The bill would impose an additional intergovernmental mandate by preempting state laws restricting the use and transport of certain firearms, and may preempt state regulation of the disposal of certain types of byproduct material by transferring that authority to the NRC. CBO estimates that the aggregate cost of the mandates in the bill would be below the annual thresholds established in UMRA for intergovernmental mandates (\$62 million in 2005, adjusted annually for inflation) and for private-sector mandates (\$123 million in 2005, adjusted annually for inflation).

Requirements on NRC Licensees

Additional Fee for Background Checks. Section 103 would require fingerprinting of additional individuals connected with nuclear facilities (public and private) as part of criminal background checks done through the U.S. Attorney General's Office. The cost of the government background checks would be borne directly by licensees. The duty to pay the increased cost would be both a private-sector and intergovernmental mandate under UMRA, but because the cost of each background check is small and many persons associated with nuclear facilities have already undergone background checks, CBO estimates that the aggregate cost of the mandate would be small.

Security Evaluations. Section 104 would require the NRC to conduct security-response evaluations at certain nuclear facilities. Those evaluations would include force-on-force exercises and would require facilities to remedy any defects. Given that NRC is already conducting those evaluations, CBO estimates that the incremental costs of such legislated requirements would be minimal.

New Tracking System for Spent Fuels Rods and Segments. Section 109 would require NRC to establish uniform guidelines for tracking and controlling spent fuel rods and segments at nuclear power plants. Current NRC regulations include similar guidelines for tracking and controlling spent fuel rods and segments, and CBO estimates that any additional cost to NRC licensees resulting from this provision would be minimal.

New Tracking System for Radiation Sources. Section 201 would direct the NRC to establish a mandatory tracking system for category 1 and 2 radiation sources (as defined by the International Atomic Energy Agency) in the United States. Category 1 and 2 radiation sources are held by both public and private NRC licensees and are used for medical and industrial purposes. The tracking system would include identification by serial number, reporting of changes in ownership or location of radiation sources, reporting of lost sources, and reporting through a secure Internet connection. According to the NRC, identification of radiation sources already is being done to some extent, and the agency expects to take on most of the cost of creating the tracking system. Based on this information, CBO expects that, while there would be some personnel costs for certain NRC licensees to comply with the monitoring and reporting requirements of the new tracking system, any additional costs would be small.

Requirements on Importers and Exporters of Radiation Sources

Section 201 would prohibit the import and export of radiation sources in the United States unless certain requirements are met. The bill would require that exporters of radiation sources verify that the recipient country may receive and possess the radiation source and has the capability to securely manage the source; send notice to the recipient country prior to shipment; and obtain notification upon receipt of the shipment. Importers of radiation sources would be required to prove that they are lawfully authorized by the NRC to receive the radiation source. Those requirements would constitute private-sector mandates under UMRA, however, the costs of those mandates would be small. According to NRC, similar regulations already have been proposed by the agency. An analysis of those proposed regulations by the Office of Management and Budget indicates that the aggregate cost to all importers and exporters would be approximately \$130,000 annually.

Preemptions of State Laws and Regulations

Authorization of Firearm Possession. Section 102 would preempt state laws restricting the use and transport of certain firearms. That provision would expand existing NRC authority that allows the agency to authorize certain security employees to use and transport several types of firearms, regardless of state or local regulations. Such a preemption would not impose significant costs on state or local governments.

Waste Disposal Provisions. Depending on future action by the NRC, section 202 could preempt state regulation of the disposal of certain types of radioactive byproduct material. Specifically, this section of the bill would transfer regulatory authority for the disposal of naturally occurring and accelerator-produced radioactive byproduct material to the NRC.

Currently, states have this authority by default because the NRC does not expressly regulate such material. For those states with direct agreements with the NRC (agreement states), the authority to regulate the disposal of NARM would be returned to the state per those agreements. However, in non-agreement states, that authority would remain with the NRC. NRC sources have expressed an intent to maintain the status quo across all states for the disposal of NARM, and therefore, CBO estimates that the costs of this potential preemption would be insignificant.

PREVIOUS CBO ESTIMATE

On April 19, 2005, CBO transmitted a cost estimate for H.R. 1640, the Energy Policy Act of 2005, as ordered reported by the House Committee on Energy and Commerce on April 13, 2005. S. 864 includes provisions similar to sections 662 through 665 of H.R. 1640. The estimated costs for those similar provisions are identical.

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